

What is claimed is:

1. A solid chelating resin comprising
 - a) a reactive hydrophobic backbone
 - b) pendent carbodithioic groups
2. The resin of claim 1 wherein said hydrophobic backbone is nucleophilic.
3. The resin of claim 1 wherein said resin is a poly(dithiocarbamate).
4. The resin of claim 3 wherein said resin contains no tertiary nitrogen groups.
5. The resin of claim 1 further comprising a cross-linking reagent reacted onto said reactive sites.
6. The resin of claim 5 wherein said cross-linking reagent reacts to form an alkylene, amine, ether, phosphine, sulfide, amide, urea, urethane, phosphoamidate, or thioamidate linkage.
7. The resin of claim 5 wherein said cross-linking agent comprises 4,4'-methylenebis (phenyl isocyanate) (MDI), polymeric MDI or polymethylene polyphenyl isocyanate (PAPI), tolylene 2,4, diisocyanate (TDI), isophorone diisocyanate (IPDI), terephthalic acid and its analogs, and adipic acid and its analogs.
8. The resin of claim 2 wherein said nucleophile comprises a C, N, O, P, S, or mixtures thereof.
9. The resin of claim 1 wherein said reactive hydrophobic backbone comprises a diamine, multiamine or a diol.
10. The resin of claim 9 wherein said reactive hydrophobic backbone comprises hexamethylenediamine (HMDA), diethylenetriamine (DETA), triethylenetetramine (TETA), tetraethylenepentamine (PETA), or a mixture thereof.
11. A process for producing a chelating resin comprising:
 - a) reacting a nucleophilic compound with carbon disulfide in a suitable solvent, to form a carbodithioic acid;
 - b) neutralizing said carbodithioic acid with a base to form a carbodithioic acid salt;
 - c) reacting said carbodithioic acid salt with a crosslinking reagent in a suitable solvent to form a solid chelating resin.
12. The process of claim 11 wherein said chelating resin comprises a (poly)dithiocarbamate

1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400 8500 8600 8700 8800 8900 9000 9100 9200 9300 9400 9500 9600 9700 9800 9900 10000

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